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ABSTRACT

Prepared to stimulate and advance nursing research in postsecondary education, the papers included in these proceedings offer a variety of perspectives on the outlook for nursing research in the 1980s. The following papers are presented: (1) "Creating Research Environments for the 1980s," by Geraldene Felton; (2) "Creating an Environment for Successful Grant Applications," by Pauline Komnenich, which discusses resources within the National Institutes of Health; (3) "The Dean's Role in Creating a Research Environment," by Valencia N. Prock, which focuses on areas crucial to planning and implementing productive research at a school of nursing; (4) "Creating a Research Environment: A Faculty Member's Perspective," by Mara M. Baun, which details how a university school of nursing can involve its faculty in creative and scholarly activities; (5) "Establishing Clinical Research Programs in the 1980s," by Sydney D. Krampitz, which describes how to establish and nurture a research environment in a clinical setting; and (6) "Today's Nursing Research Issues, Problem Areas, and Experiences in a Clinical Environment," by Helen Jameson, which explains the need for special planning related to the development of clinical research. (RO)

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midwest nursing research society

CREATING RESEARCH ENVIRONMENTS IN THE 1980's

Fifth Midwest Nursing Research Conference

April 13-14, 1981

Madison, Wisconsin

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Edited by

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INTRODUCTION

In April 1981, the Fifth Annual Midwest Nursing Research Conference was held in Madison, Wisconsin, by the University of Wisconsin-Madison School of Nursing. This conference was important in the development of nursing research in the Midwest, for it marked the one-year anniversary of the formally organized Midwest Nursing Research Society.

A spirit of research was in the air at this conference. Excitement and enthusiam for nursing research in the Midwest permeated the scientific sessions, the invited papers, the research interest group meetings, and the formal and informal discussions. The theme of the conference **Creating Research Environments in the 1980's** was most significant as it represented not only the goal for the future, but also the basic purpose of MNRS, i.e., to create a research environment for nursing in the Midwest.

The Midwest Nursing Research Society and the Fifth Annual Midwest Nursing Research Conference grew from the dreams and efforts of many. The invited papers presented here are a reflection of both the growth and the dreams of nursing research in the Midwest. These papers clearly present the enthusiasm for and commitment to nursing research. They are, indeed, landmarks for MNRS and nursing research in the Midwest.

Joyce J. Fitzpatrick, Ph.D., F.A.A.N.
President
Midwest Nursing Research Society
1980-81

ACKNOWLEDGEMENTS

The editors wish to thank Vickie Boultbee, MAIN's Research/Secretarial Assistant; and Vicki Johnson, MAIN's Administrative Secretary, for preparing and typing the manuscripts for this publication.

Our thanks, too, to the contributing authors who wrote timely, thought-provoking articles concerning the outlook for nursing research in the 1980's.

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Executive Director

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Program and Communication
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CREATING RESEARCH ENVIRONMENTS FOR THE 1980'S

CREATING RESEARCH ENVIRONMENTS FOR THE 1980'S

(KEYNOTE ADDRESS)

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It is not too difficult for experienced observers of the nursing scene to identify and describe the forces likely to affect the financing of higher education and nursing research in the coming decade. Nor is it particularly difficult for any of us who are experienced in trying to solve problems in this milieu to interpret the directions in which those forces will take us if we merely sit back and observe them.

Certainly it is apparent to all of us that we face serious problems in the years ahead; problems for which our experience may not have had adequately prepared us. For some, the problems will appear insoluble, and they will retreat as rapidly as possible. For others, the problems will appear unreal; and they will fight to preserve the status quo and to protect their immediately perceived self interests as long as possible. For still others, now is the time to face the future squarely and realistically; and to mobilize our capacities and our resources.

Nurses in universities are trying to accomplish three distinct missions--teaching, research, and service--which frequently conflict and lead to confusion, frustration, and ambiguity. Obstacles are all too common, but so is evidence that nurse researchers do not give up easily. And that is part of the irony.

Nursing continues to wage an uphill struggle to gain recognition for nursing research among other health professionals, increase grant support from federal agencies, gain acceptance of the relationship between nursing research and patient care, and force differentiation between medical research and nursing research.

This paper will deal with the ironies that bedevil us, the the role of the nurse academic administrator in the research environment, economic considerations, and some tentative strategies for creating research environments in the 1980's.

THE ACADEMIC DEAN

By virtue of his/her title, the dean or administrative head of the college of nursing is in a position to influence and promote nursing research activities. Primarily, most academic nursing deans accept the responsibility to contribute to nurturing the individuality and core professional identity of nursing and nursing's progress toward scientific maturity. In this instance maturity is evidenced by increased quality and range of the scientific substructure of nursing. Specifically, academic deans recognize the need to make nursing a mature, carefully articulated discipline of scientific investigation and learning whose strength derives from the coordinated efforts of its many parts. Throughout this sequence, the process of seeking, investigating, learning and teaching goes forward continuously, if with different emphasis now and then, in the variety of issues addressed.

I, and other nurse deans (Note 1) have proposed that the principal role of the academic dean in promoting nursing research is to create conditions that encourage scholarliness; provide a strong research environment principally through recruiting, maintaining, and sustaining good faculty; faculty development; and identify and use resources (personnel, equipment, space, time, supplies, repute, money) congruent with the purposes and vision of the university and the college.

Several important assumptions underlie a commitment to research:

1) Facilitation of inquiry is a legitimate expectation among colleagues in any scholarly discipline.

2) Nursing must encourage and maintain strong, steady support of the search for knowledge necessary to meet the public's health needs and expectations.

3) The goal of nursing research is to provide systematically derived knowledge that guides nursing practice and contributes to the solution of health problems.

4) The capability to build and enhance a research climate differs from institution to institution, is situation-specified, and depends on institutional values, goals, and structures supportive of science.

5) Strong graduate programs must be based on faculty scholarship, research mentorship, communication among investigators, and clinical excellence.

6) Fulfillment of research goals requires sufficient intellectual and material resources in the proper proportion for the activity to be successfully undertaken.

Fine (1980) maintains that one measure of an organization is how the organization minimizes performance gaps: defined discrepancies between what the organization could do by virtue of a goal-related opportunity in its environment and what it actually does in relation to that opportunity. The challenge to nursing academic administrators in times of contraction and restriction is to appropriately allocate resources to develop interests in an orderly way. "Orderly way" in this context relates to attempts to lessen the research-performance gap. With the constraints on available resources, the academic dean spends a large portion of time trying to minimize the research-performance gap.

In the research sphere, the modern dean functions in several ways. The dean's role in the development of nursing faculty research skills involves recruitment of qualified faculty; support of planning equitable, realistic long-range goals; discussion of opportunities and resources; strategies for collaboration and consultation; and provision of an academic milieu in which research is recognized and rewarded,

and advancement is contingent on research productivity and other scholarly activities. In selection of faculty, the dean strives to obtain individuals with research skills or indications of research potential. She/he is innovative in assisting faculty to practice and to grow continually in areas of inquiry, and to emulate the form and substance of academia. All of these activities occur simultaneously while the dean also attends to institutional commitments, to students, and to various publics.

The dean communicates to the faculty the value she/he attaches to research and urges continued growth in research competencies by: 1) joint exploration of methods to combine research and teaching roles; 2) viewing clinical teaching as an opportunity to test hypotheses; and 3) promoting congruence among teaching, clinical, and research roles through relevant assignments, flexible but disciplined use of time, and choice of research conducive to classroom, community or clinical settings.

PROMOTING THE QUALITY OF TEACHING RESEARCH

In nursing, profound changes in models of delivery of health care, types and complexity of problems presented, and expanding medical and health technology all demand research emphasis on three problem areas: 1) clarification of the conceptual bases of nursing care techniques; 2) extension of the range and power of nursing research; and 3) explanation and evaluation of clinical nursing practices, nursing roles and nursing systems, nurse and patient activities and support/care systems.

For nursing to attain individuality as a scholarly discipline, it has to insist on research-oriented and data-based nursing education programs and curricula. This is not only a requirement for practice but also necessary for normalization (socialization) of the research function as a legitimate activity for faculty, graduate students, and undergraduate students working with faculty investigators.

The acquisition of these elements is an important contribution to professional identity. The dean assures the environment and resources for research that has clinical relevance for nursing practice and increases the quality, range, and power of the scientific explanation of clinical practices. Further, the dean attempts to recruit relevant faculty engaged in their own research and who project a climate which indicates the research is an exciting and valuable professional activity.

Perhaps the greatest present need is to promote the comprehension of the meaning and worth of nursing research and the ends to be achieved, and to inspire in others a confidence in nurses' abilities as researchers. Only with this understanding will nursing's funding base for research be equal to that of others in the institution whether intramural, government, foundation, regional planning board, or whatever.

Presently, deans carry out the research support and understanding function in many ways. Some are directly involved in legislation and provide legislative testimony. Others actively encourage and reward faculty to value research, to do research, and to base nursing interventions on basic scientific phenomena generated by research. Some also build support systems for research and research training through work in professional groups, societies and organizations, peer review, consultation, and scholarly publications. Many deans strive for personal identity and independence as the model of the active, involved researcher-scholar.

ECONOMIC CONSIDERATIONS

Whether you believe we are heading for good times, bad times or that the economy is just marking time with no clear direction depends on whom you ask. The White House believes we are heading for a recession, the Federal Reserve Board sees some strength and many private economists are taking a middle ground. Even though we are exposed to conflicting forecasts, we are being bombarded with evidence of the negative characteristics of the current state of long-term economic expectations.

What is obvious is that the economic signs are weak almost everywhere one looks. There is a slowdown in the growth of personal income, the index of leading economic indicators has fallen in the past three months, housing starts and permits are off, unemployment is high, capital investments are reduced, bankruptcy rates are high, credit restrictions are increasing, and consumer confidence is ebbing. These are all characteristics of a recession. And, in spite of these characteristics, inflation remains, partly because much of the impact of recessionary forces has not yet hit some parts of the country. As the recession moves more broadly throughout the nation, the national impact can only exacerbate all our economic woes.

Thus, the combination of continued high interest rates and a likely slowing of consumer spending can be expected to result in a short-term recession and uncertainty in the long-term economic future, trends especially important in discussing the problems of higher education. For example, the depression factors in the economy reduce the tax base and result in declining tax revenues for all levels of government. This is occurring when unemployment and other factors increase the burden on government to carry out previously accepted social responsibilities, e.g., welfare, Medicare, higher education. The problem of reduced tax revenues and increased public responsibility is further compounded by growing social concern about the tax structure and the acceptability of government services, creating pressures for tax limitations and pressures to shift the tax burden. And under our new federal government it can be anticipated that revenues available from other sources to finance higher education and research will also be reduced, at least during the short term.

Thus, during the next decade, nursing academic administrators and nursing researchers are likely to be found with a situation that is supremely ironic. Less public funding will be available for higher education and nursing research. This will occur when formerly expected levels of private sector financing of education and research, which might help to support those losses, are endangered. Since the economic environment may also reduce the level of philanthropic support available, it does not seem likely that the gap in financial support for nursing education and nursing research will be filled easily. And the worst part of this sad scenario for nursing will be played out during a period when inflation continues to force price increases for goods and services. As tax dollars become more scarce, government will often choose between its roles as provider and as purchaser, and it has a strong vested interest in its provider role.

In carrying out its special interest roles, government (federal and state) must balance its fiscal priorities in the same manner as any other purchaser or provider, e.g., its expenditures must be balanced with competing fiscal demands for education, research, health care, transportation, defense, energy and other areas. Obviously, the economic environment affects the ability of government to carry out its multiple missions. Also its flexibility in increasing revenues to meet costs is quite limited. The current and expected social and political environment (as reflected in demands for tax limitations, balanced budgets, and so forth) adds further restrictions to government's response to health, education, research and other social problems.

Thus, at least in the next decade, government cannot be relied on to promote the entire public interest in health and nursing education and research either at the state or federal level. The imperatives of its role as purchaser and provider will increasingly cause government to sacrifice its historical concerns about nursing education and research, and about the accessibility, availability, acceptability, and quality of health care services.

THE DOUBLE BIND

Pogrow (1981, P. 64) in The Chronicle of Higher Education wrote an article on the competition between business and academia for researchers and referred to the double bind:

> The term "double bind" describes the Catch 22 situation that may arise when organizations try to solve problems by increasing the scale of existing efforts without fundamental changes in strategy. In so doing, situations exacerbate the original set of problems to such a degree that the probability of finding solutions is diminished.

The double bind approach enables nursing to mobilize around familiar battle cries. Our most recent experience last year was mobilization for continuation of the Nursing Training Act; this year our efforts are to salvage federal support for nursing research. Thus, double bind strategies bedevil nursing.

Proposals for dealing with the problems of nursing research are a good example of what Pogrow calls "double-bind-think." Debate about the current status of research in colleges of nursing seems to be limited primarily to questions of scale. The general belief is that if financing levels were increased, nursing research would flourish. Such belief forms almost the sole basis for nursing's internal management strategies. The validity of this belief is questionable.

Under conditions of competition in the generation of knowledge and under present conditions of fiscal restraint, increasing federal support for nursing research will not, in and of itself, reduce the problem of the paucity of nursing research. Pogrow goes so far as to suggest that perhaps existing federal money for supporting university research might best be focused on particular institutions, individuals, and research areas. I do not advocate such a position.

However, if the problems now surfacing for nursing and nursing research can and will not be solved by increasing federal support, then fundamental change is required. The question remains as to what strategies are most appropriate.

POSSIBLE STRATEGIES

I do not believe anybody has definitive answers to the problems confronting nursing in the coming decade. I know that I have no answers. But I do have a few ideas I ask you to consider. What are politically useful things to do?

It seems to some observers that the most likely course for government is to develop and apply more direct and stringent controls on the way in which providers and organizations use government funds and on the total amount of money which is made available. Although more direct controls on total expenditures have thus far met with such political opposition that they could not be enacted, there is reason to believe that similar efforts in the next few years will marshal more congressional support. It also seems natural to expect considerable agitation to develop state regulation as a more direct and comprehensive expenditure-control measure.

There is a growing discontent with research in the non-academic world which is often coupled with a misconception that research is an academic luxury rather than an essential ingredient of the university process. Some of the discontent stems from an arrogance on the part of academic researchers, exemplified by an unwillingness to explain or simply defend the research under scrutiny. During this era of fiscal accountability there is no longer room for such a posture on the part of the researcher, particularly the nurse researcher. The public has a right to know what is happening. This is not to say, however, that most of the criticism may not in fact arise out of a misconception of the essential purpose of the university to foster scholarship and disseminate knowledge, elements without which teaching could not exist. Where the concern about the values of the research dimensions of scholarship will have a great impact on the university is in the domain of public service. Consequently, the university of today is under great pressure to be more service oriented than it has been in the past.

Thus, the appreciation of research funding is becoming increasingly important if the credibility of the academy is to be sustained. Notwithstanding that the expansion of public service activities and university outreach has a profound impact on all aspects of university life, it is however, basic to the relevant and modern university.

I think it might be useful therefore, for nurse researchers to develop and carry out research demonstration programs designed to mount a consistent and coordinated attack on existing patterns of health-service utilization. Examples of such programs would investigate client lifestyles, professional values, and study the influence of the effect of demand on supply.

I have no small regret that some of the best minds of my generation (a large number of whom are nursing faculty) place research, teaching, and practice into three separate, non-interacting compartments. This approach is comparable to insisting on treating the world of nursing's work in a 19th Century fashion by tinkering with its problems as a mechanic looks at an engine--spreading the separate parts on the floor and considering each one to find the malfunction. The university has accepted the fact that the research function is the highest form of teaching. When this obligation is fulfilled in schools and colleges of nursing, to the extent of integrating teaching and research so that research is not considered an "extra" in nursing education at any level, then we can expect that both emerging faculty and emerging practitioners will value research as an approach to their daily tasks at least to a greater extent than is presently evident.

Another strategy is committing ourselves to social responsibility. Making a commitment to one's social responsibility is a grown-up endeavor. Research is the behavior that can give evidence of social responsibility that can elevate the profession of nursing. Giving evidence requires that we nurses agree among ourselves that research is significant, that we make political claim to research as an integral part of nursing; increase the number of researchers who are expert clinicians; perceive, explain, understand, and utilize the Hawthorne Effect on subjects, participants, and others involved in or having close proximity to nursing research; and assist in the implementation of research find-

ings significant to improve or change nursing practice. In essence, we must work harder to create a sense of worth for research, create a public image of a concerned group, and use our capabilities to help practitioners view problems as having more than one solution, help them learn what the solutions are, and how to find them.

My final suggestion is to propose that all of us become more deeply involved in an effective community relations program. Without that kind of support, all of our efforts could become meaningless. The current debates over the nursing shortage and nursing competencies reveal the limited understanding of nursing issues and health economics among decision makers, opinion makers, health providers, elected officials, and the general public. Nor have those of us who think we already understand entered into dialogue often enough with others to be certain we know their concerns and viewpoints. Unless the debate is constructively joined and the tradeoffs clearly understood, progress in bringing about more understanding and necessary support of nursing and nursing research will be slow. And during the traumas of the eighties, we will need all of the understanding and support we can earn. Also, communicating positively and regularly to various constituencies will assist us in doing something else that needs to be done--gaining support from individuals and foundations in the form of endowment funds and private gifts, pledges or memorials (Swanson & Sweeney, 1981).

CONCLUSION

Thus, the politically expedient thing to do is 1) recognize, label, support and empower the academic dean to do what she/he is doing to create a research environment; 2) recognize and speak knowledgeably about the realities of the economic situation; 3) perfect our technologies to cultivate <u>all</u> of our publics; and 4) show a sense of proportion. Our range of choice may be wide or narrow as circumstances direct, but our opinions, our passions, our integrity, in short, all of our actions are in our power which is ubiquitous and visible. This is the most extreme claim of human professional freedom.

How will we survive through the eighties? For nurses, as people to be happy, we must be free. To be free means to take risks. Also, to be free, we must reach for the best part of our being, and we must show grace under pressure. That is what is difficult. There are those of us who love our work, love the idea of being nurses and researchers. But it will never get easier and we cannot expect it to if we keep trying for something better than we can do.

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CREATING AN ENVIRONMENT FOR SUCCESSFUL GRANT APPLICATIONS

CREATING AN ENVIRONMENT FOR SUCCESSFUL GRANT APPLICATIONS

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Once a researcher gains expertise in a field of inquiry and formulates a researchable question leading to outcomes considered scientifically sound and meritorious, support for the pursuit of that query is required. Support comes in the form of resources which may be human resources, financial resources and/or other material resources. Over the years the government/university partnership has been a source of that support. In this brief presentation, I have reflected on a unique opportunity provided to me as a nurse reseacher-research administrator to gain knowledge of resources within the National Institute of Health (NIH) and other federal agencies.

Given a scientifically meritorious project and the expertise to implement that project, certain key elements are paramount to a researcher's successful competition for research support. To the seasoned researcher, these elements are simply logical strategies, which are basically a matter of common sense. To the novice researcher or new grant applicant from an applied discipline such as Nursing, which in itself is relatively new to competition in the research arena, elements to successful grant application may be critical.

KEY ELEMENTS TO SUCCESSFUL GRANT APPLICATIONS

The five key elements which appear, to me, to be basic to creating a successful environment for accessing research resources, public or private, include: a) knowledge of the agency, foundation, or institution providing research support and its position in the administrative hierarchy; b) knowledge of award mechanisms; c) knowledge of relevant programs supported by that agency; d) knowledge of individual(s) who can provide information, interpret program priorities and act as an ombudsman(men) for an applicant; and e) knowledge of the referral and peer review process for evaluating research proposals.

Because the NIH is the major source of support for health-related research, and the agency about which I have the most information, the discussion and the illustrations presented will focus on that agency. However, it is anticipated that the principles discussed can be generalized to other agencies and foundations.

Knowledge of the Agency

The first key element for a potential grant applicant to consider is knowledge of the agency providing the grant support and its position in the administative hierarachy. The NIH, for example, is a complex organization with its various Bureaus, Institutes, and Divisions (BIDs). Although a potential applicant need not have an in-depth understanding of the complexity of the organizational structure, it is helpful to be aware of how the BIDs came about and the focus of the research priorities. Knowledge of how the NIH or any other agency fits into the organizational structure of the Department of Health and Human Services (DHHS), provides the applicant with a concept of the agency and the language to communicate about programs within that agency.

History of the NIH. In August 1887, the embryo organization of the present-day NIH was established as a one-room laboratory called the Laboratory of Hygiene. The unit was a bacteriological laboratory in the Marine Hospital at Staten Island, New York, which was the beginning of laboratory research within the United States Public Health Service. In 1898, this medical laboratory was moved to Washington, D.C., at which time it became the Hygiene Laboratory.

Congress enacted Public Law 244 in 1902, which authorized the supervising Surgeon General of the Marine Hospital (Public Health Service) to promulgate regulations related to the presentation and cure of diseases of man. It was at that point that the Hygiene Laboratory was given its regulatory authority and remained with the NIH until 1972, when the funds were transferred to the Food and Drug Administration.

The grant-making authority of the NIH dates back to the Act of 1918 which authorized appropriations for the support of the Army to fight venereal disease. It was under that Act that the Public Health Service made grants to various institutions and established a precedent for the federal government to conduct research through awards to non-federal experts.

The present-day NIH was established through an Act of Congress approved May 26, 1930, when the Hygiene Laboratory officially became the National Institute of Health and subsequently received a new home through the generous contribution of Mr. and Mrs. Luke Wilson of Bethesda, Maryland. In 1948, the National Institute of Health became the National Institutes of Health through an Act that created the National Heart Institute. Within that same year, other Institutes were established within the NIH. In 1953, the Clinical Center was established as a research hospital for patient care, providing a new dimension to the NIH (Kommenich, Note 1).

Organization and Administration. The NIH is one of the six agencies that make up the Public Health Service. It consists of eleven research Institutes, three research and support Divisions, the Clinical Center and the John E. Fogarty International Center for Advanced Study in the Health Sciences. Figure 1 presents a clear illustration of agencies of the DHHS and the position of the NIH in that Department. These agencies include: a) the Food and Drug Administration (FDA); b) Health Services Administration (HSA); c) Alcohol, Drug Abuse and Mental Health Administration (ADAMHA); d) Center for Disease Control (CDC); e) the Health Resources Administration (HRA); and f) the NIH.

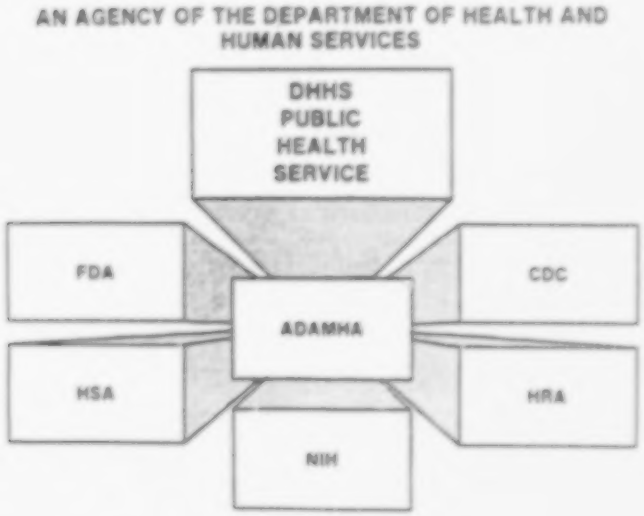

Figure 1. Agencies of the Department of Health and Human Services (Courtesy DRG, NIH).

Among the eleven Institutes of the NIH are three Bureaus and nine distinct Institutes (see Figures 2 and 3). The research and support Division of the NIH are presented in Figure 4.

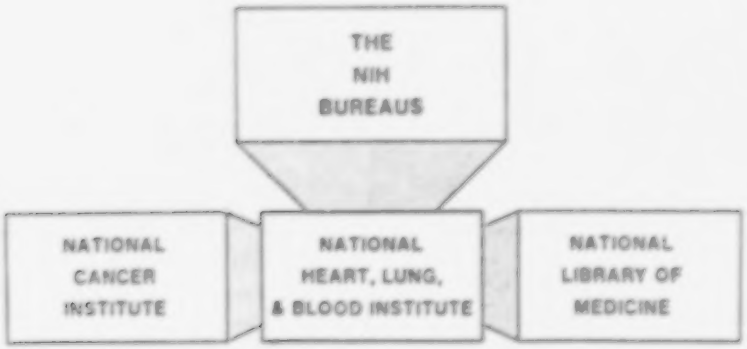

Figure 2. The Bureaus within the NIH
(Courtesy DRG, NIH)

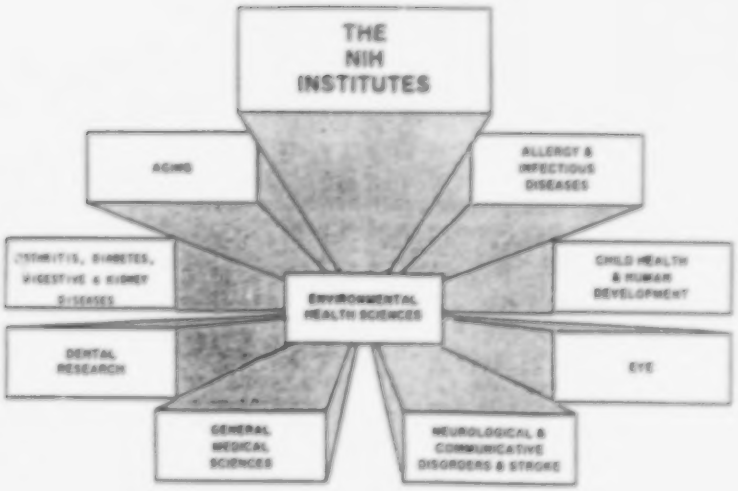

Figure 3. The Institutes within the NIH
(Courtesy DRG, NIH)

Figure 4. The Research and Support Divisions of NIH (Courtesy DRG, NIH)

Knowledge of Award Mechanisms

The mechanisms for awards in extramural research and development are divided into two main categories: the grant and the contract (DHHS, August 1981). Grants provide support or stimulate research and do not include NIH staff in performance of the activity. Grants are generally investigator initiated through an eligible institution. The investigator is responsible for developing the ideas, concepts, methods and approach for a research project. Contracts, in contrast, are basically a procurement of service directed toward specific information, products or services and are monitored by the NIH staff. They are often solicited through requests and proposals (RFPs). In certain circumstances grant applications are invited to support areas of special interest to an awarding unit. In these cases requests for applications (RFAs) and program announcements are issued (see pp.18 and 19 of this text). A third funding instrument which is currently being introduced is the cooperative agreement (pursuant to the Federal Grant and Cooperative Act of 1977, PI 95-224). "The cooperative agreement like the grant, is created to support the recipient's activities, but provides for substantial involvement on the part of the agency during the period of performance" (DHHS, 1981).

All of the Institutes and the Division of Research Resources (DRR) award grants and contracts to non-profit universities, hospitals, private research facilities and state and local government organizations. According to **The Federal Register** (April 6, 1981) profit-making institutions are now eligible to apply for grants. Almost 3,000 projects are underway on site at the NIH. The NIH provides about 41% of all federal funds for this purpose. Approximately 10% of the total funds budgeted for the NIH go to intramural research; and about 9% go to administration of both intramural and extramural programs, operating the National Library of Medicine and providing for capital improvements and major repairs of NIH facilities. The largest portion (81%) is used for projects and activities in other organizations and institutions through grants and contracts (the extramural programs). (See Figure 5).

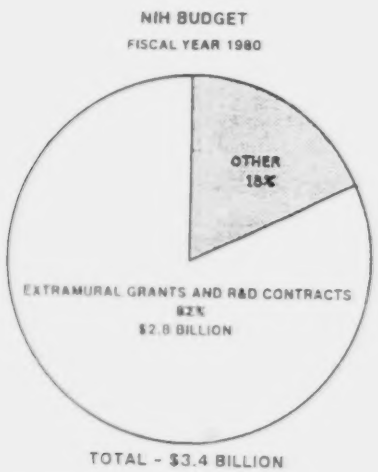

Figure 5. NIH Budget, Fiscal Year 1980
(Courtesy DRG, NIH)

The **NIH Guide for Grants and Contracts** announces NIH scientific initiatives and provides NIH policy and administrative information. This information may be received by writing directly to the Grants and Contract Guide Distribution Center, National Institute of Health, Building 31, Room B3BN10, Bethesda, Maryland 20205.

Knowledge of Programs and Individuals

The NIH is physiologically oriented with a primary focus on disease. The most comprehensive overview of the NIH extramural programs, award mechanisms and scientific programs is a compendium entitled **NIH Extramural Programs** (1980) published by the DHHS. Programs within the NIH may result from health-related needs to the community as well as interests and perceived needs of the research community. Figure 6 illustrates the extramural research support of the NIH.

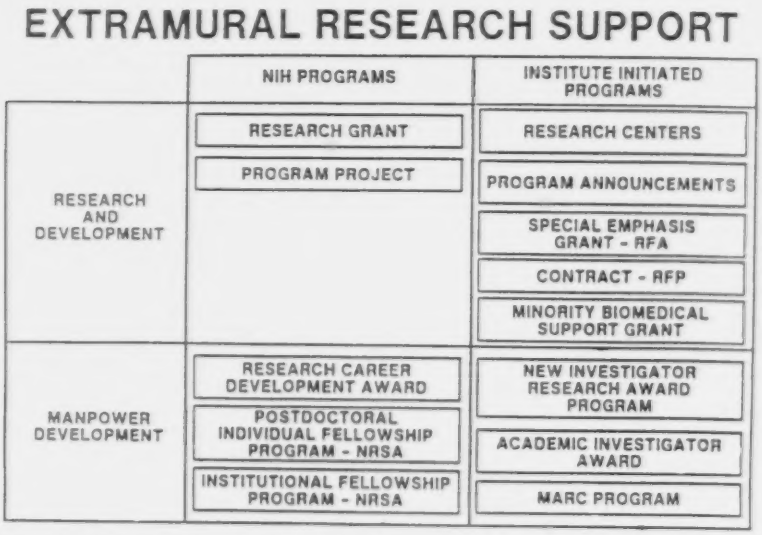

Figure 6. Extramural Research Support of the NIH
(Courtesy of DRG, NIH)

Information about programs and research initiatives are made public through program announcements and RFAs. A program announcement differs from a request for application in several ways. A program announcement:

1) Describes existence of an NIH extramural research activity.

2) May describe new or expanded interest in a particular extramural program.

3) May be a reminder of a continuing interest in an extramural program.

4) Has no funds set aside.

In contrast, an RFA:

1) Is a formal announcement describing an institute initiative in a well defined scientific area.

2) Is an invitation to the field to submit research grant applications for a one-time competition.

3) Has set-aside funds for a certain number of awards.

Among the 14,000 employees of the NIH are 2,500 doctorally prepared scientists, 1,000 physicians and veterinarians, and 700-800 guest workers. Each institute within the NIH has its own Director who functions autonomously but in a way which will insure the cohesiveness of the overall mission. (See Figure 7).

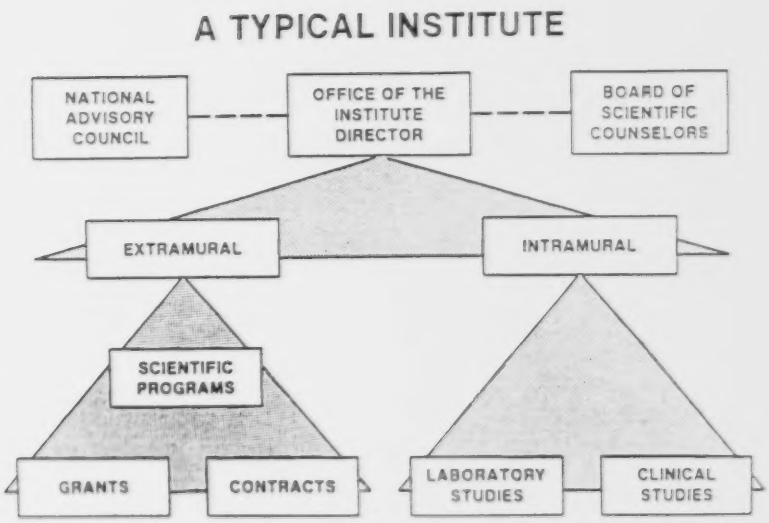

Figure 7. The Structure of a Typical Institute in the NIH. (Courtesy DRG, NIH)

Knowledge of the Referral and Peer Review Process

The fifth and perhaps most important element in preparation of a grant is knowledge of the referral and peer review process for evaluating proposals. Often the new investigator will develop a grant application addressing a research problem which may be scientifically meritorious, and yet that application may be poorly presented. Likewise, an application may be appropriate in form but lacking in substance. In either instance, contact with the funding agency and knowledge of the peer review mechanisms within an agency are essential to success.

The posture the NIH takes toward supporting research is that all research submitted as grant applications should be evaluated by scholars in the field by way of a two-tiered review mechanism. This mechanism insures that the funds are distributed on the basis of excellence, that the agency adheres to a set of principles established by the DHHS, and that the research priorities of that agency are responsive to social concerns.

Figure 8 depicts how a research grant is made. The two-tiered mechanism consists of the study section or initial review group, which is made up of scholars in the area of research, and a National Advisory Council or Board, made up of scholars and lay persons who make recommendations based on study section reviews and program relevance determined by the program staff. Initial review groups (IRGs) in the Division of Research Grants in the NIH are usually referred to as study sections. Both study sections and councils are only advisory bodies. Final action on the application is made by the Institute Directory which takes into account the recommendations of the advisory bodies.

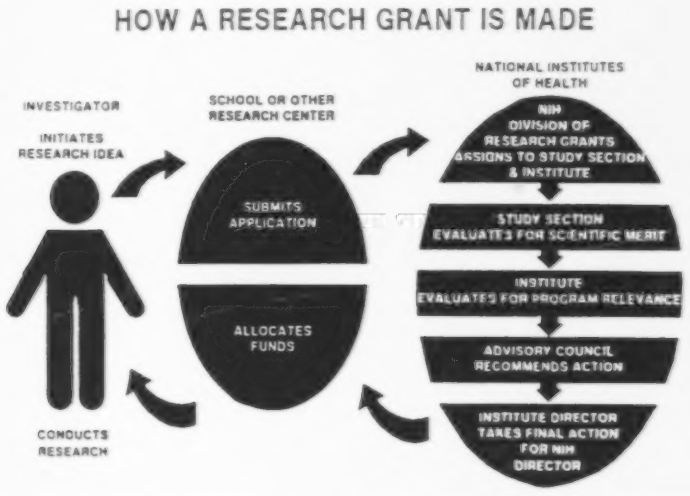
HOW A RESEARCH GRANT IS MADE
INVESTIGATOR
INITIATES RESEARCH IDEA
SCHOOL OR OTHER RESEARCH CENTER
SUBMITS APPLICATION
ALLOCATES FUNDS
CONDUCTS RESEARCH
NATIONAL INSTITUTES OF HEALTH
NIH DIVISION OF RESEARCH GRANTS
ASSIGNS TO STUDY SECTION & INSTITUTE
STUDY SECTION EVALUATES FOR SCIENTIFIC MERIT
INSTITUTE EVALUATES FOR PROGRAM RELEVANCE
ADVISORY COUNCIL RECOMMENDS ACTION
INSTITUTE DIRECTOR TAKES FINAL ACTION FOR NIH DIRECTOR

Figure 8. An Illustration of the Process for Review and Evaluation of a Grant Application
(Courtesy DRG, NIH)

All grant applications to the DHHS are submitted to the Division of Research Grants (DRG). A referral officer makes assignment to an Initial Review Group (IRG) in the NIH and an Institute or Division. Agencies outside the NIH have their own initial review groups although in most instances this review is performed by an IRG in the Scientific Review Branch of DRG. Assignment by a referral officer is based on the scientific expertise of the membership and assignment to an institute/agency is based on the overall mission of that institute or agency and the programmatic mandates and interests.

Referral officers are professional scientists who may also serve as executive secretaries of DRG study sections. Figure 9 illustrates the DRG organizational structure and Figure 10 the Functions of the Referral and Scientific Review Branches.

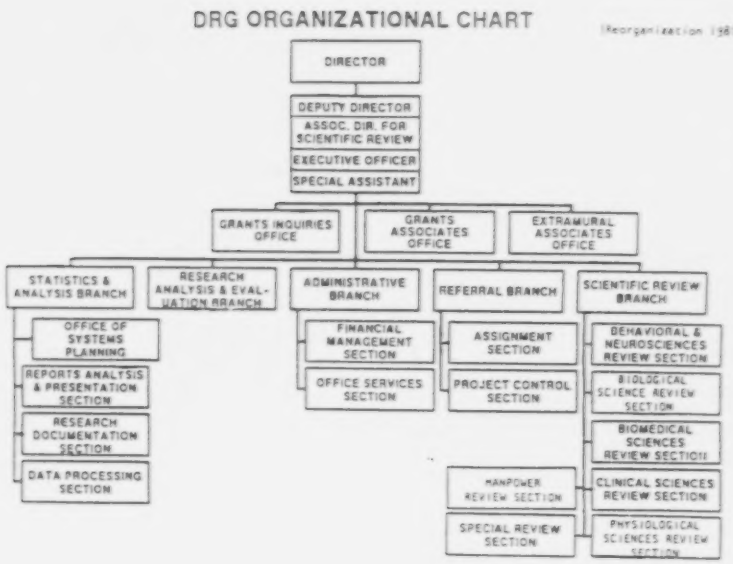

Figure 9. The DRG Organizational Structure
(Courtesy of DRG, NIH)

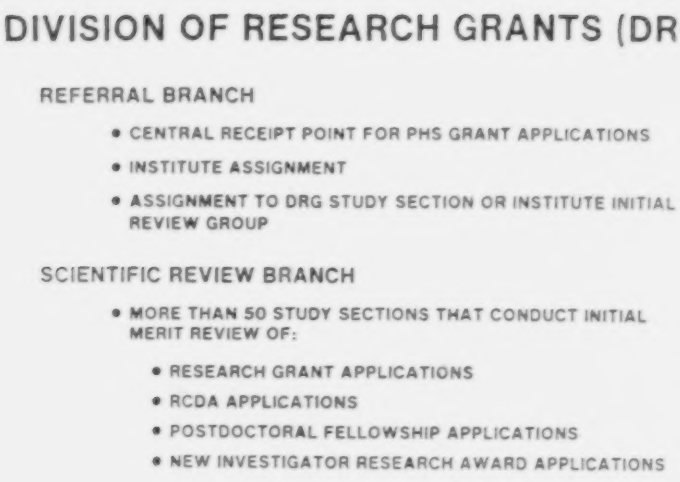
DIVISION OF RESEARCH GRANTS (DRG)
REFERRAL BRANCH
• CENTRAL RECEIPT POINT FOR PHS GRANT APPLICATIONS
• INSTITUTE ASSIGNMENT
• ASSIGNMENT TO DRG STUDY SECTION OR INSTITUTE INITIAL REVIEW GROUP
SCIENTIFIC REVIEW BRANCH
• MORE THAN 50 STUDY SECTIONS THAT CONDUCT INITIAL MERIT REVIEW OF:
• RESEARCH GRANT APPLICATIONS
• RCDA APPLICATIONS
• POSTDOCTORAL FELLOWSHIP APPLICATIONS
• NEW INVESTIGATOR RESEARCH AWARD APPLICATIONS

Figure 10. Functions of the Referral and Scientific Review Branches. (Courtesy DRG, NIH)

Figure 11 illustrates the various DRG study sections and relevant codes which appear on the title page of the application. Other Divisions within the DHHS have IRGs which may be chartered or unchartered. For example, the Division of Nursing, within the Health Resources Administration (HRA),

DRG STUDY SECTIONS

CODE	STUDY SECTION	CODE	STUDY SECTION
ALY	ALLERGY AND IMMUNOLOGY	IMS	IMMUNOLOGICAL SCIENCES
BM	BACTERIOLOGY AND MYCOLOGY	MGN	MAMMALIAN GENETICS
BEM	BEHAVIORAL MEDICINE	MCHA	MEDICINAL CHEMISTRY
BNS	BEHAVIORAL AND NEUROSCIENCES FELLOWSHIPS	MET	METABOLISM
BMT	METALLOBIOCHEMISTRY	MBC	MICROBIAL PHYSIOLOGY
BCE	BIOCHEMICAL ENDOCRINOLOGY	MBY	MOLECULAR BIOLOGY
BIO	BIOCHEMISTRY	CTY	MOLECULAR CYTOLOGY
BI	BIOMEDICAL SCIENCES FELLOWSHIPS	NLS	NEUROLOGICAL SCIENCES
BNP	BIO-ORGANIC AND NATURAL PRODUCTS CHEMISTRY	NEUA	NEUROLOGY A
BBCA	MOLECULAR AND CELLULAR BIOPHYSICS	NEUB	NEUROLOGY B
BBCB	BIOPHYSICAL CHEMISTRY	NTN	NUTRITION
BPO	BIO-PSYCHOLOGY	OBM	ORAL BIOLOGY AND MEDICINE
CVA	CARDIOVASCULAR AND PULMONARY	ORTH	ORTHOPEDICS AND MUSCULOSKELETAL
CVB	CARDIOVASCULAR AND RENAL	PBC	PATHOBIOLOGICAL CHEMISTRY
CBY	CELL BIOLOGY	PTHA	PATHOLOGY A
CPA	CHEMICAL PATHOLOGY	PTHB	PATHOLOGY B
CLN	CLINICAL SCIENCES FELLOWSHIPS	PHRA	PHARMACOLOGY
CMS	COMMUNICATIVE SCIENCES	PB	PHYSICAL BIOCHEMISTRY
RNM	DIAGNOSTIC RADIOLOGY	PC	PHYSIOLOGICAL CHEMISTRY
END	ENDOCRINOLOGY	PHY	PHYSIOLOGY
EDC	EPIDEMIOLOGY AND DISEASE CONTROL	RAD	RADIATION
ECS	EXPERIMENTAL CARDIOVASCULAR SCIENCES	REB	REPRODUCTIVE BIOLOGY
EI	EXPERIMENTAL IMMUNOLOGY	SSP	SOCIAL SCIENCES AND POPULATION
ET	EXPERIMENTAL THERAPEUTICS	SSS	SPECIAL PROGRAMS
EVR	EXPERIMENTAL VIROLOGY	SAT	SURGERY, ANESTHESIOLOGY, AND TRAUMA
GMA	GENERAL MEDICINE A	SB	SURGERY AND BIOENGINEERING
GMB	GENERAL MEDICINE B	TOX	TOXICOLOGY
GEN	GENETICS	TMP	TROPICAL MEDICINE AND PARASITOLOGY
HEM	HEMATOLOGY	VR	VIROLOGY
HUD	HUMAN DEVELOPMENT AND AGING	VISA	VISUAL SCIENCES A
HED	HUMAN EMBRYOLOGY AND DEVELOPMENT	VISB	VISUAL SCIENCES B
IMB	IMMUNOBIOLOGY		

Figure 11. The Study Sections of the DRG with the Code which Appears on the Title Page of an Application (Courtesy DRG, NIH)

has an IRG made up of individual scientists with expertise in nursing research. This group is an unchartered review committee with an executive secretary. On receipt of a nursing proposal, the referral officer in DRG will assign the application to Nursing as a primary assignment and perhaps give it as a secondary assignment to another Division or Institute based on its program relevance. Every investigator receives a card from the DRG indicating the review group and the Institute assignment. (See Figure 12) Both the IRG (noted under review group on illustration) and the Council dates are indicated. The Institute is indicated by code Number, e.g., in Figure 12, HL refers to Heart Lung, followed by a number.

ASSIGNMENT OF APPLICATIONS

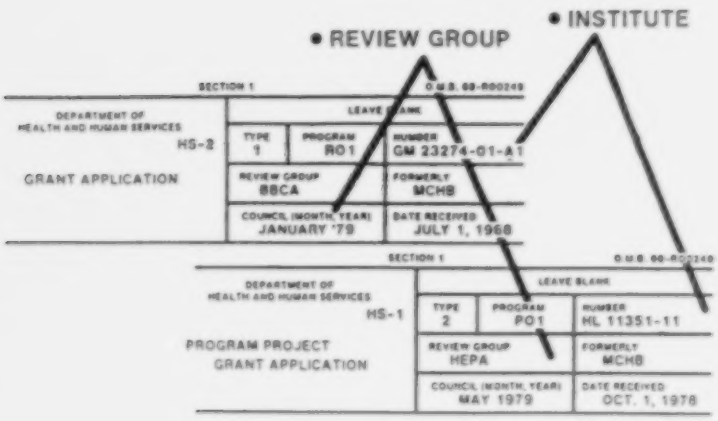

Figure 12. An Illustration of the Assignment of Applications (Courtesy DRG, NIH)

The Executive Secretary of a study section is a member of the Scientific Review Branch of the NIH and serves in a different capacity from those individuals who establish program priorities. The primary functions of the Executive Secretary are to: a) perform administrative and technical review of applications; b) select reviewers; c) manage study sections; d) prepare summary statements; and e) provide any requested information about study section recommendations. In addition to the Executive Secretary, each study section has a Grants Assistant assigned who assists the Executive Secretary in all aspects of the review.

Investigators may and should inquire as to the progress of an application at various stages. For example, it is acceptable to call the referral officer and ask for clarification regarding the assignment of the application or to question its disposition. An investigator should also become knowledgeable about the reviewers who serve on study sections prior to submitting an application. The NIH publishes a complete description of its Advisory groups as do other agencies. (See Figure 13) The reviewers who serve on these committees are nominated by the executive secretaries of the review groups, who are health scientist administra-

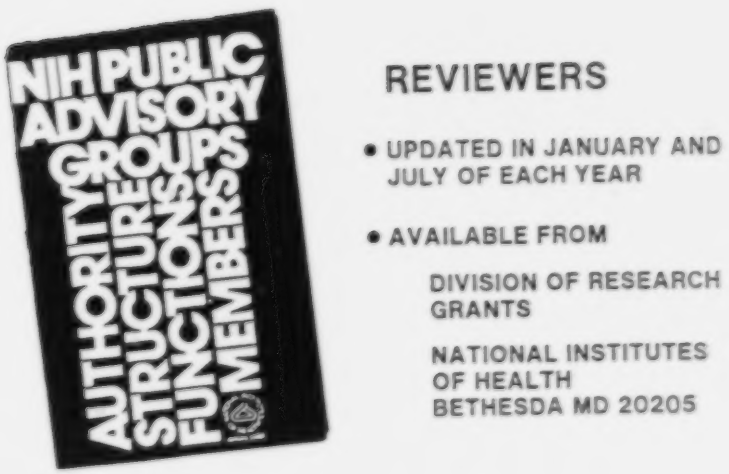

Figure 13. Source for Reviewers Who Serve on NIH Public Advisory Groups (Courtesy DRG, NIH)

tors in charge of review and advisory groups. These nominations are based on knowledge and experience, input from NIH staff, counsel with other scientists as well as other sources. Final appointment to the scientific review groups (SRGs) and advisory committees are made by the Director, NIH. The Secretary of DHHS makes appointments to Councils. These appointments are for a period of four years. They are staggered so that about one-fourth of the membership of a group are new each year.

Each application is reviewed for scientific merit by an IRG and rated accordingly. Figure 14 illustrates the review criteria and Figure 15 the potential actions for recommendations. If a proposal is approved, it is given a priority rating. The rating scale is presented in Figure 16. Evaluation of the application, the recommendation and the final score are included in the summary statement, which is forwarded to the National Advisory Council or Board through the program officers.

RESEARCH GRANTS

REVIEW CRITERIA

- SIGNIFICANCE AND ORIGINALITY FROM A SCIENTIFIC AND TECHNICAL STANDPOINT
- ADEQUACY OF THE METHODOLOGY TO CARRY OUT THE RESEARCH
- QUALIFICATIONS AND EXPERIENCE OF THE PRINCIPAL INVESTIGATOR AND STAFF
- REASONABLE AVAILABILITY OF RESOURCES
- REASONABLENESS OF THE PROPOSED BUDGET AND DURATION
- OTHER FACTORS: HUMAN SUBJECTS, ANIMAL WELFARE, BIOHAZARDS, ETC.

Figure 14. General Criteria for Review of Grant Applications (Courtesy DRG, NIH)

ACTIONS

- **APPROVAL:** BASED ON THE RELEVANT REVIEW CRITERIA, THE APPLICATION IS OF SUFFICIENT MERIT TO BE WORTHY OF SUPPORT. THE VOTE FOR APPROVAL IS EQUIVALENT TO A RECOMMENDATION THAT AN AWARD BE MADE PROVIDED SUFFICIENT FUNDS ARE AVAILABLE. THE RECOMMENDATION CAN BE FOR THE TIME AND AMOUNT REQUESTED OR FOR AN ADJUSTED TIME AND AMOUNT. A PRIORITY RATING IS REQUIRED.
- **DISAPPROVAL:** THE APPLICATION IS NOT OF SUFFICIENT MERIT TO BE WORTHY OF SUPPORT. DISAPPROVAL MAY ALSO BE RECOMMENDED WHEN GRAVELY HAZARDOUS OR UNETHICAL PROCEDURES ARE INVOLVED, OR WHEN NO FUNDS CAN BE RECOMMENDED, SUCH AS IN THE CASE OF A SUPPLEMENT DEEMED TO BE UNNECESSARY. NO PRIORITY RATING IS REQUIRED.
- **DEFERRAL:** THE STUDY SECTION CANNOT MAKE A RECOMMENDATION WITHOUT ADDITIONAL INFORMATION. THIS INFORMATION MAY BE OBTAINED BY A PROJECT SITE VISIT OR BY SUBMISSION OF ADDITIONAL MATERIAL BY THE APPLICANT.

Figure 15. Potential Actions Which Can Be Taken By a Review Committee. (Courtesy DRG, NIH)

Figure 16. Quality Rating Scale for Priority Scores (Courtesy DRG, NIH)

The Council may (a) concur with the study section action; (b) modify the study section action; or (c) defer for further review. The determination of an award is ultimately based on scientific merit and program considerations. Listed below are the most common reasons for disapproval:

1) Lack of new or original ideas

2) Diffuse, superficial, or unfocused research plan

3) Lack of knowledge of published relevant work

4) Lack of experience in the essential methodology

5) Uncertainty concerning the future directions

6) Questionable reasoning in experimental approach

7) Absence of an acceptable scientific rationale

8) Unrealistically large amount of work

9) Lack of sufficient experimental detail, and/or

10) Uncritical approach

In summary, an investigator should be knowledgeable about the funding agency, become known through personal contact with key individuals establishing program priorities, be aware of program priorities, submit a relevant and meritorious application in a program relevant area and look forward to an award.

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The project-grant application of the NIH. Federation Proceedings, 1973, 32 (5), 1541-1550.

Site visits for review of grant applications to the NIH. Federation Proceedings, 1975, 34 (2), 131-136.

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The grants clinic. Grants Magazine, 1978, 1 (3), 263-286.

THE DEAN'S ROLE IN CREATING A RESEARCH ENVIRONMENT

THE DEAN'S ROLE IN CREATING A RESEARCH ENVIRONMENT

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How does a Dean create a research environment? The following five areas are crucial to planning and implementing productive research at a school of nursing:

1. Seeks out, understands, and internalizes the mission of the parent institution; assists faculty to do this also.

2. Develops, with faculty, a long-term academic plan with goals that are measurable in relation to recruitment, retention, promotion of qualified doctorally prepared faculty and to the research enterprise.

3. Works at setting up a network of support within the school, university, and community for the mission of the school, including research.

4. Manages the flow of incentives and contributions of faculty so that the school "works" from a programmatic point of view.

5. Develops an oranizational environment with faculty to maximize academic freedom and faculty governance.

MISSION OF THE UNIVERSITY

Not all universities or even schools of nursing are the same. A dean needs a clear idea of the university's mission.

The university gives the individual scholar the freedom and intellectual environment for research and the opportunity to transmit the qualities and understanding of research into all the scholar's teaching. The purpose of a university is an intellectual one with its uniqueness arising from the power of thought, the dedication to basic inquiry and the discipline of intellectual training (Levi, 1968).

What unites a university and a school is not information and ideas held in common, but the values of scholarship and the intellectual life.

GOALS AND RECRUITMENT

The mission statement of any system embodies purposes, philosophy and values. Goals, on the other hand, are concrete, specific, behavioral, operational and measurable. According to Stravic (Note 1):

1) It is better to plan than not to.

2) Having goals tends to result in greater progress than not having goals.

In my view the most important component in forwarding the research mission of the school is the recruitment and appointment of qualified, doctorally prepared faculty. This is one of the most important functions of the dean and tenured faculty members.

NETWORK OF SUPPORT

The dean develops a network of support within the university and outside the university to assist him/her in obtaining the resources to meet the missions of the school, including the research mission. This means that the dean interprets nursing, nursing education, and nursing research to a myriad of publics: the chancellor, vice chancellors for health sciences and for academics, deans of other schools including the graduate school dean, chairs of important committees, alumnae, members of key groups in the state legislature, health planning bodies, professional health associations, Congress members, and so forth.

This is a continuous educational process as principal actors change in academic administrative positions and on committees. In a public university such as the University of Wisconsin-Madison, the dean makes certain that a line item for research is in the budget, small though it may be.

MANAGES THE FLOW OF INCENTIVES

Once the dean and faculty know the mission of the university, the dean and senior faculty are responsible for managing the flow of incentives and contributions to faculty so that the school operates from a programmatic point of view.

At the University of Wisconsin-Madison, all doctorally prepared faculty are expected to engage in research as part of the workload. Since neither the University nor the School of Nursing has a written workload statement, the Dean of the School of Nursing appointed a committee to make recommendations to the faculty concerning a workload statement. After a year, the committee reported that it could not reach a concensus. Currently, the associate deans meet with faculty members to negotiate the semester's work for the baccalaureate and graduate programs. Assistant professors are given adequate time and resources to engage in research essential to acquiring tenure.

ORGANIZATIONAL ENVIRONMENT

I favor an instrumental, liberal organization which maximizes academic and faculty governance. Academic freedom is defined as not as institutional autonomy, but the right and obligation of each individual faculty member to teach and publish the truth as he/she sees it and to choose his/her own subjects and methods of research and disclose the findings without regard to their consequences. Trust is a prerequisite to the effectiveness of any institutional climate. The dean has certain limited powers but the deanship is not legitimized as a substantive decision-making agency.

Recently an Ad Hoc Faculty Governance Study Committee at the University of Wisconsin-Madison gave its report (Note 2) to the faculty senate:

> "At this university, the professor is, in large measure, a self-directing professional. Furthermore, faculty members should have a hand in basic decision-making; because, with their expertise and experience, they have an important, indeed an indispensable contribution to make in the formulation of basic institutional policy decision...."

The Executive Committee (faculty tenured at the associate and professional levels) of the School of Nursing is involved in advising the Dean about personnel, budget allocations, research and office space, purchase of costly equipment, and other matters. A standing committee on academic resources is responsible to the faculty for policy and plans related to all academic resources including instructional media and computer use. The five areas mentioned are crucial for a dean to consider in creating a research environment in a school or college of nursing.

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CREATING A RESEARCH ENVIRONMENT--A FACULTY MEMBER'S PERSPECTIVE

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Director of the Nursing
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The involvement of its faculty in creative and scholarly activities is a major mission of most universities and therefore of most schools of nursing. Given the acceptance of this stated goal, how does the university and thus the school of nursing achieve this objective? Primarily, it depends on its faculty, because it is the faculty who engage in research and guide students in research. Thus, it is the faculty who must perceive the environment of the university and of the school to be one in which creativity and research are encouraged.

DEFINITION

First, what is a "research environment"? I define it as one in which ongoing research takes place; however, a research environment is more than just the research. It involves a number of components: (1) active researchers and their staffs; (2) students both conducting research on their own and participating in ongoing research of faculty members; (3) physical facilities; (4) support systems, e.g., accounting, purchasing; (5) administrative support and commitment from the university administrative level to the departmental level; and (6) a "research atmosphere."

RESEARCHERS

Obviously, a university may have beautiful facilities, supportive administration, plenty of students, and many university-wide support systems, but if there are no nurse researchers, there is really no research environment. The first element, therefore, in a research environment is the researcher. In nursing, researchers are greatly diversified. Until recently, the preparation of nurse researchers took place solely in academic disciplines outside of nursing, i.e., physiology, psychology, sociology, and education, to name but a few. Nurse researchers continued to pursue their work in these diverse areas after graduation. Even with the advent doctoral programs in nursing and thus research preparation in nursing, students have been encouraged to pursue their own interests in addressing nursing problems and thus have perpetuated the diversity of research areas with the concomitant diversity in problems addressed, methodology, analysis, and so forth. An advantage of this research diversity is a variety of expertise used to study different areas of nursing. A disadvantage of the diversity is the creation of a research environment where each researcher in a given school pursues different areas of research, with little opportunity for colleagueship except in a general way. For example, a nurse studying the effects of exercise on certain cardiovascular and respiratory variables may have little or no real understanding of the research of a nurse studying the components of paternal bonding with infants, and vice versa.

Generally within an institution, there are only a few researchers and each is studying a different area. Thus, creating an atmosphere for sharing research methods, findings, technical problems, and so forth, is difficult. In many disciplines outside of nursing, such collegial atmospheres are possible where institutional groups and subgroups meet regularly to share ongoing and completed research and are available to each other on an informal basis for consultation and problem solving. In the search for such colleagueship, many nurse researchers have joined and found support with outside groups existing within the nurse researcher's area. But, would it not be the ideal to have such groups within one's own school of nursing in order to have a true research environment?

Given that most researchers do not have such an ideal situation in which to do their work, what aspects of this ideal can be used to create a research environment? Where there are a number of researchers in a school, sharing can occur on a more general level. For example, established researchers can give pointers to neophytes, such as, how to keep accounts, what qualities to look for in hiring a research assistant, and maybe even tried and true ways to "outfox" the bureaucracy. Informal colloquia in which ongoing and completed research can be presented and discussed to "get an outsider's" viewpoint help create a research environment.

In addition, given that researchers themselves are the key component of the research environment, the environment should help to create more researchers. Thus, another outcome of sharing within an institution and of "talking" research is to attract faculty not presently engaged in research to get involved. An atmosphere in which data and methods are being discussed cannot help but motivate others to do research and have their own data to discuss.

STUDENTS

One of the greatest enhancements of the research environment is the students. Faculty with ongoing research projects who can attract students to these projects both as research assistants and graduate students doing thesis and dissertation research enhance not only their own research environment but that of the entire school. Why is it that students always ask the one question that you as a researcher had not thought of? The contributions of students are invaluable in conducting studies which further general research projects and/or work out methods for future use. The students' sharing with each other and faculty certainly contributes to an atmosphere where "research is spoken."

FACILITIES

The third component of a research environment is the physical facilities. Researching is difficult when one does not have adequate space and equipment. Laboratories are as essential to laboratory research as is office space and equipment, including sufficient room for storage of data, for all types of research. But, how many nurse researchers

have had to transport heavy pieces of equipment over to a clinical unit in the hospital every time they wanted to study a patient. (How some of these nurses ever completed their studies was an example of mind over matter.) Having space in the hospital provided for their equipment would have been part of the research environment.

The physical proximity of nurse researchers' offices and/or laboratory space to each other further serves to create a research environment. It will also give colleagueship to the staff members of each researcher who may have little or nothing in common with the rest of the nursing school staff. In addition, physical proximity of space allows for researchers to use items in common, such as computer teminals, and still have them close to one's research area.

SUPPORT SYSTEMS

Another critical aspect in maintaining the research environment is the presence of school and university support systems for research. Prime examples are offices of research facilitation which help new and established researchers become apprised of funding opportunities and of abstract deadlines; who assist in the preparation of proposals, continuation reports, and final reports; and who help process the bulk of the paper work as well as to perform portions of the typing and duplicating involved. Research newsletters generated by these offices help to inform faculty both within and outside the school of current funding sources, who has been recently funded, and who has recently had an article published, thereby further enhancing the environment of research.

Additional critical support systems need to be present within the university to aid faculty doing research. For example, an animal facility with adequate availability of veterinary consultation is essential to projects using animals. On the other hand, by not providing adequate services, departments as processers of research proposals or handling accounting can either enhance or seriously deter the research environment within a school of nursing. What department would be more critical than the purchasing department, yet, if purchasing routinely takes three to six months to process a request, the research environment is seriously jeopardized.

Another critical item of support within the university is the presence or absence of a vice-president or vice-chancellor for research and whether or not that person and department are truly committed to fostering nursing research. This is important because nurses are fledglings in a more established world of research. A commitment on the part of the administration to support nursing research until it becomes more firmly established, especially if that support also includes seed money for equipment and facilities, buttresses the research environment.

Within a school of nursing, support for research must range from the dean to the individuals in the department. Verbal support for research needs to be backed up by time and money to ensure a blooming research environment. Creative deans and department heads are not afraid to invest time and money in promising faculty in order to generate research projects, and have not only the right but also the obligation to hold accountable faculty members for demonstrated outcomes in terms of proposals generated and research completed. Faculty who are constantly "in process" but never seem to have demonstrated outcomes do not contribute to the research environment; they detract from it.

RESEARCH ATMOSPHERE

The last component of the research astomsphere is probably the most difficult one to specify. Most of us have probably experienced it at one time or another, either as faculty members or as students. It is all of the components listed before and yet it is more than the sum of them. It is probably different for each of us. It is sense of commitment to the value of our research as well as the realization that others respect what we are doing. It is that intangible something in the air that helps us to be creative and to do better and better, and somehow that excitement carries us along to do more than we ever though we could.

ESTABLISHING CLINICAL RESEARCH PROGRAMS IN THE 1980'S

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Establishing and nurturing a research environment in a clinical setting provides a unique challenge for the nurse administrator. Having initiated a research program in a 1,000 bed V.A. facility, I readily agree with Davis (1981) who states, "the introduction of research values and activities to nurses in the practice setting are as much organizational and cultural as they are methodological and technical." Although increasing emphasis is being placed on the utilization of clinical research in nursing practice, professional nurses in practice settings usually have had little opportunity to develop a research orientation or research skills.

PLANNING

A number of issues must be addressed by the nurse administrator as she/he attempts to change existing attitudes and values prevalent in nursing practice. A major concern to which the administrator must devote time and resources has been identified as the need to involve the professional nurses employed in the setting during the early planning stages of the research program. This early involvement in planning is recognized in the literature as critical for the program's/project's later acceptance by nursing service personnel (Fuchs & Moore, 1981; Spross, Kilpack & Marchewka, 1981).

ORIENTATION OF STAFF

Various innovative approaches may be used to orient staff to the research process. Those of us who have developed a research department or program recognize the need to gain wide acceptance of research as a legitimate component of nursing practice.

Communication

The institutionalization of clinical research activities is fostered by including a statement regarding clinical research in the nursing service philosophy. Nursing service program objectives must also be incorporated which reflect this value orientation and a commitment to clinical research by the nursing staff. Early development of a nursing service research committee and the establishment of a forum in which information on research projects and findings can be shared are activities critical to successful program development. Including research activities in the staff newsletter also increases awareness and interest.

Involvement

The clinical research effort will be greatly enhanced by involving selected nursing personnel who possess a full range of educational preparation and experience. The broad communication of research committee activities and program planning will encourage institutional support and will identify additional interested nurses possessing similar expertise. Developing a research "orientation" demands a concerted effort to educate staff regarding the purpose and value of clinical research and to build staff interest in clinical inquiry. The involvement of staff in the development of a clinical research program has been identified as a major factor motivating staff members to use research findings in clinical practice and thus improve patient care.

Evaluation

Changing professional expectations must be reflected in the institution's evaluation program. This will include research-oriented behaviors in all position descriptions. However, it is critical that mechanisms to support staff research development be available if behavior is to be demonstrated and evaluated. The use of a comprehensive evaluation gives support to the research effort, thus involving staff members and enhancing the institutionalization of the research effort.

SUPPORT SERVICES

The development of a successful clinical research program also necessitates the establishment of policies in nursing service to govern the use of release time to conduct research activities and to provide support services for researchers, e.g., computer time, consultant services, and secretarial support. Once the staff becomes actively engaged in research, it can be anticipated that increasing demands will be placed on institutional library resources. These demands often necessitate the expansion of existing library holdings or the provision for additional interlibrary loan support services.

The nurse administrator initiating a clinical research program will need to provide financial support to develop the program. This will include seed money or start-up funds for pilot projects and/or support services for grantsmanship. Although initial costs may be limited, it must be anticipated that a number of costs will be incurred with this activity before outside funding sources become available. As the research effort is institutionalized, a mechanism for reporting research findings at the facility needs to be developed. In addition, the availability of institutional support for dissemination of research findings at local and national meetings will also prove a strong incentive for further research development activities. The opportunity to share findings with colleagues and to engage in dialogue regarding the research design and results will encourage refinement of instruments and enhance future research efforts.

ATTITUDES

Nurse administrators actively engaged in establishing a research climate must recognize several critical issues related to change. Attitudes and values change slowly and a research venture may be identified by the staff as unnecessary or, in fact, unwanted and intrusive. To overcome this attitude, various approaches may be used to help facilitate staff acceptance. One way may be the staff orientation pro-

gram. New staff orientation can be expanded to include information on the institution's clinical research, with a focus on including research activities in nursing service. Staff meetings may be structured to include the discussion of research goals and the application of research findings to nursing practice. In addition, research presentations should be scheduled to accommodate interested staff members who can attend only when the program does not conflict with other professional responsibilities. It has been clearly demonstrated that input from staff nurses on proposed programs will also aid in increasing attendance and gaining later support.

Although the challenges encountered in establishing a clinical research environment in the 1980's are many, the development of a research orientation in the clinical setting and the availability of a well-prepared nurse researcher will enhance not only research efforts, but contribute directly to creating an environment in which both quality patient care flourishes and staff satisfaction increases.

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TODAY'S NURSING RESEARCH ISSUES, PROBLEM AREAS, AND EXPERIENCES IN A CLINICAL ENVIRONMENT

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This paper will explain the need for special planning and review four areas identified in Rochester Methodist Hospital's feasibility study related to the development of clinical research.

PLANNING

In a hospital setting, the preparation and ongoing development of a nursing research program requires especially good planning, because the development of nursing research is viewed differently than other programs such as patient education and quality assurance. The reasons appear to be that hospitals have functioned without clinical research departments; no one requires nurses to do research; patient dollars may not always be appropriate for research reimbursement; and nurses are accustomed to making decisions based on their experiences, not necessarily on the hard data from research. All of this means that no matter how small a research program, planning is essential for its success, as resources become more scarce. Tight budgets increase the need to consider joint research programs between nursing service and nursing education; however, the required planning and preparation, regardless of how a research program is developed or funded, is still crucial to its success.

Administrators generally are aware of the need to plan for people's attitudes toward research and substitute cost of research for money, but other areas need to be considered too. At Methodist, part of our planning process was to contract for a feasibility study called "To Assess the Climate for the Establishment of a Nursing Department Program for Systematic Studies" (research). Since no model existed for this study, the investigators developed a model addressing the following areas: subject participants, professional participants, marketing, organizational system, economics, legal and statutory, facilities, and contributions to the institutional research endeavors.

FOCUS

Four essential items were addressed:

1) Why have a research department?

2) Costs

3) People/attitudes

4) Location of the department

Why have a research department?

Most of the time, added services are justified as necessary to improve patient care; however, the justification may not be totally accepted where research is concerned. Methodist's chief reason for having a research department is that it would develop and increase the climate for inquiry among staff, which has and will continue to indirectly improve care as well as hospital operations. Also, providing research opportunities for graduate students will benefit both the student and the institution. Research also provides hard data for making decisions rather than relying only on previous experience. Indirectly, nurse recruitment will be enhanced because of the opportunity for continued professional development, an area in nursing's shortage and image problem that cannot be discounted. There are reasons why a nursing service department needs a study or research department.

Costs

Research directly related to patient care is a legitimate cost because it contributes to improved care. But other aspects of research may not be as directly related to the patient-care issue. State agencies, who review budgets may or may not approve research as part of a budget. In addition, institutional budget pressures cannot be ignored. If an institution has a research department, it is likely that another program or department will have its funding reduced. Thus, funding research is a difficult issue that means negotiating within the nursing department, as well as possibly between other departments, for a share of the total funds.

Nevertheless, funding may be found for nursing research. It may be best to consider a separate corporation to fund research. Nursing service can contract with that corporation. This allows for research funds and/or contributions to be solicited from individuals or outside agencies and remain dedicated to this purpose rather than included in department operational funds.

People/Attitudes

Staff preparation is of the utmost importance. They determine the success of a research program. Staff need to be involved and "buy into" the program. Staff criticisms will occur if monies are spent and staffing is short, especially if they do not see a major contribution from the research. Staff need to be assisted in using and understanding positive effects of research.

Other departments also need to be involved in the planning. Since nursing is the largest department in most hospitals, other departments often experience jealousies related to nursing's size, power, and resources. Therefore, as resources become scarce, a greater impact of concern about fair share takes place which may decrease the working relationship between departments. Since having the support of people within and outside the nursing department is essential to establishing a research department, a large number of people need to be included in the research planning. In a clinical setting, this is a key element in research development.

Location of the department

Innumerable options provide for placement of a research program either within or outside the nursing department. The appropriate location will largely be determined by the purpose or intent of the research program. The location is part of a value and political process that depends on assistance from various departments, depending on their relationships within that institution.

A research department may likely begin in one area such as quality assurance and later move into a total hospital or separate corporation concept. The consultants in Methodist's study suggested that the research department be part of the quality assurance program.

CONCLUSION

All aspects concerning the adoption of a research department are important, but the planning aspect of a research department, within a nursing service department, is of utmost importance.

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